

Poirier, Kaitlyn (ENRD)

From: RICHARD DOMINGUE <rkdomingue@msn.com>
Sent: Thursday, September 9, 2021 4:06 PM
To: anne mullan (anne.mullan@noaa.gov); jim.myers@noaa.gov
Cc: Andrew.Ainsworth@usace.army.mil; chris.fontecchio@noaa.gov; chris_allen@fws.gov; gregory.a.taylor@usace.army.mil; Poirier, Kaitlyn (ENRD); Kathryn.L.Tackley@usace.army.mil; kirk52@peak.org; Laurie Rule (lrule@advocateswest.org); lizzy; melissa.jundt@noaa.gov; Michael.Schoessler@sol.doi.gov
Subject: Current Detroit Operations - a question

Dear Anne and Jim, As you know, we have proposed that the Corps increase project discharge to at least 2,000 cfs now in order to increase the likelihood of achieving a WSL of 1465 by mid to late October to facilitate operation of the lower ROs. The federal parties have responded that the risk to redd dewatering precludes such operation. Below I present some simple calculations that show that if we are to achieve timely operation of the LROs, we need to accelerate the draft now. I would also point out that flows up to 3000 would comport with the 2008 BiOp spawning season range which was designed to avoid redd dewatering. My questions are: what new information suggests a higher dewatering risk than previously assessed?, and Given the simple analysis below, do you continue to oppose increasing discharge now?

Identify the project discharge rate likely to achieve el 1465 by Oct 15, assuming a start date of today:

Current WSL (ft) 1515 9/9/2021

Current storage (af) 283416

Desired Draft el (ft) 1465

Desired Draft date 15-Oct

Desired storage (af) 174246

Change in storage (af) 109170

Time to achieve (days) 36

Rate (af/day) 3032.5

Rate (cfs) 1529 This is the rate of outflow above the rate of inflow needed to achieve the desired elevation

Inflow

Sept Oct

448 539 N. Santiam

157 271 Breitenbush

605 810 Total

665.5 891 Total plus 10% for other inflows

Hence, to have an average chance of achieving 1465 by Oct. 15 an average project discharge of about 2200 would be needed through the end of Sept, increasing to 2500 on Oct 1.

If discharge is continued at 1500 cfs through the end of Sept (20 days) the project would draft about 60,000 acre feet, to 223000 acre-feet, leaving about 50,000 acre-feet to draft in 15 days. This would require discharge of about 3300 cfs over inflow, **or a total project discharge of around 4,400**. These are rough estimates and detailed modeling would provide more precise information.

Rich Domingue
Box 68956
Oak Grove, OR 97268
Cell 971-373-2661
Message Machine 503-653-5490

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From: RICHARD DOMINGUE <rkdomingue@msn.com>
Sent: Thursday, September 9, 2021 6:20 PM
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Cc: Andrew.Ainsworth@usace.army.mil; chris.fontecchio@noaa.gov; chris_allen@fws.gov; gregory.a.taylor@usace.army.mil; Poirier, Kaitlyn (ENRD); Kathryn.L.Tackley@usace.army.mil; kirk52@peak.org; Laurie Rule (lrule@advocateswest.org); lizzy; melissa.jundt@noaa.gov; Michael.Schoessler@sol.doi.gov
Subject: An error

The last paragraph of the analysis I sent you is wrong. While 1500 cfs over 20 days would discharge a total of 60,000 acre-feet, I ignored inflows during that period. I recalculated the flows likely to be needed to reach 1465 by October 15 assuming a continued 1500 cfs discharge through the 9-30. This results in the reservoir WSL being at ~ el 1500 on September 30. To reach el 1465 by Oct. 15, discharge would need to average around 3500 cfs, or about 1000 cfs more than if we accelerate drafting now. I regret my prior error.

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